

by it, I saw it had broke out at the next Joint with several Shoots of theyellow and green strip'd; and not only there, but it had also made a strong Shoot from the Root, of yellow and green strip'd; after a while I took it up with Mold to the Root, and put it in a Pot, and it flourish'd all the Summer: And going to see my Son at *Magdalen College, Oxon*, I took it with me, and made a Present of it to the President of the College, where it flourish'd two or three Years, and then for want of shifting the Pot in time, it was matted so to the bottom and sides of the Pot, that it killed it; I also at that time gave the Fellows of that College, and several others of my Acquaintance an account of the Circulation and Descent of the Sap in that Plant, and I have try'd several other sorts of variegated Plants, but do not find any of them to transmute, as that *Jessamine* will do.

I am, &c.

H. Cane.

V. *An Account of some new Electrical Experiments.*
By Mr. Stephen Gray.

HAVING often observed in the Electrical Experiments made with a Glass Tube, and a Down Feather tied to the end of a small Stick, that after its Fibres had been drawn towards the Tube, when that has been withdrawn, most of them would be drawn to the Stick, as if it had been an Electrick Body, or as if there had been
been

been some Electricity communicated to the Stick or Feather; this put me upon thinking, whether if a Feather were drawn through my Fingers, it might not produce the same Effect, by acquiring some degree of Electricity. This succeeded accordingly upon my first trial, the small downy Fibres of the Feather next the Quill being drawn by my Finger when held near it: and sometimes the upper part of the Feather, with its Stem, would be attracted also; but not always with the same Success. I then proceeded to try whether Hair might not have the same Property, by taking one from my Wig, and drawing it 3 or 4 times through my Fingers, or rather between my Thumb and Fore-Finger, and soon found it would come to my Finger at the distance of half an Inch; and soon after I found that the fine Hair of a Dog's Ear was strongly Electrical; for upon taking the Ear and drawing it through my Fingers, great numbers of them would be attracted to my Fingers at once. I was at this time in the Country, and made no further trial till my return to *London*, (which I did about the middle of *November* last) and having repeated what I had before mentioned, the next thing which I thought of, was threads of Silk of several colours, and of several finenesses, which I found to be all Electrical, but sometimes I could not succeed; the reason of which I afterwards found, as will appear in the sequel of this Discourse.

Having succeeded so well in these, I proceeded to larger quantities of the same Materials, as pieces of Ribband both of coarse and fine Silk of several colours, and found that by taking a piece of either of these of about half a yard long, and by holding the end in one Hand, and drawing it through my other Hand between my Thumb and Fingers, it would acquire an Electricity, so that if the Hand were held near the
lower

lower end of it, it would be attracted by it at the distance of 5 or 6 Inches; but at some times the Electricity would be much weaker than at others, the reason of which I conjectur'd to be, that the Ribband might have imbibed some aqueous Particles from the moist Air, which I found to be upon trial the occasion of it; for when I had well warmed the Ribband by the Fire, it never failed to be strongly Electrical.

After this I made trial of several other Bodies, as Linnen of several sorts, *viz.* Holland, Musling, &c. and Woollen, as of several sorts of Cloth and other Stuffs of the same Materials. From these I proceeded to Paper, both white and brown, finding them, after they had been well heated before rubbing, to emit copiously their Electrick Effluvia. The next Body that I found the same Property in, was thin shavings of Wood; I have only as yet tried the Fir Shavings, which are strongly Electrical. The three last Substances which I found to have the same Property, are Leather, Parchment, and those thin Guts wherein Leaf-Gold is beaten.

All these Bodies will not only by their Electricity be drawn to the Hand, or any other solid Body that is near them; but they will, as other Electrick Bodies do, draw all small Bodies to them, and that to the distance of sometimes 8 or 10 Inches. Heating them by the Fire before rubbing very much increases their Force.

There is another Property in some of these Bodies, which is common to Glass, that when they are rubbed in the dark, there is a Light follows the Fingers through which they are drawn; this holds both in Silk and Linnen, but is strongest in Pieces of white pressing Papers, which are much the same with Card Paper; this not only yields a Light as above, but when the Fingers are held near it, there proceeds a Light from them with a crackling

ling Noise like that produced by a Glass Tube, though not at so great a distance from the Fingers; to perform this, the Paper before rubbing must be heated as hot as the Fingers can well bear.

A Down Feather being tied to the end of a fine thread of Raw Silk, and the other end to a small Stick, which was fixed to a Foot, that it might stand upright on the Table; there was taken a piece of brown Paper, which by the above-mentioned method was made to be strongly Electrical, which being held near the Feather, it came to the Paper, and I carried it with the same till it came near the Perpendicular of the Stick; then lifting up my Hand till the Paper was got beyond the Feather, the Thread was extended and stood upright in the Air, as if it had been a piece of Wire, though the Feather was distant from the Paper near an Inch. If the Finger were held near the Feather in this Position, the greatest part of the Fibres next the Paper would be repelled, when at the same time if a Finger were held to the Fibres that were more remote from the Paper, they would be drawn by it.

I then repeated this Experiment without the Feather, *viz.* by a single thread of Silk only of about 5 or 6 Inches long, which was made to stand extended upright as above-mentioned, without touching the Paper; then placing my Finger near the end, it wou'd avoid, or was repelled by it, but when I had placed my Finger at about the same distance from a part of the Thread, that was about two Inches from the end, it was then attracted by it.

An Enumeration of the several Bodies mentioned herein, that are found to be Electrical.

1. Feathers, 2. Hair, 3. Silk, 4. Linnen, 5. Woollen, 6. Paper, 7. Leather, 8. Wood, 9. Parchment, 10. Ox-Guts, wherein Leaf-Gold is beaten.